

IN THE CLAIMS:

Cancel claims: 2, 7-12, 14, 19-24, 26, 31-36.

Rewrite the pending claims and add new claims as follows:

1. (Currently Amended) A method of querying number-range searches, comprising:  
receiving a number-range search query having ~~one or more number ranges~~ a number range, wherein ~~at least one~~ the number range includes ~~at least one~~ a boundary number;  
generating an expression of ~~one or more~~ numerical index terms based on the boundary number, wherein ~~at least one of the~~ a respective numerical index term in the expression includes information ~~associated with an indexed~~ indicative of an integral portion of a logarithm of the boundary number; and  
searching a document index using the expression to identify ~~identifying~~ one or more documents containing ~~indexed~~ numbers that satisfy the expression.
2. (Cancelled)
3. (Currently Amended) The method of claim 1, wherein at least one numerical index term in the expression includes information indicating that a specified digit is the last non-zero digit of a respective number.
4. (Currently Amended) The method of claim 1, wherein at least one numerical index term in the expression includes information indicative of the sign of ~~at least one~~ a respective number.
5. (Currently Amended) The method of claim 1, wherein at least one numerical index term in the expression includes information indicative of a number type associated with a respective number range.
6. (Currently Amended) The method of claim 1, wherein ~~at least one numerical index term~~ the expression includes ~~information indicative of at least one~~ a plurality of numerical index terms that each correspond to a single respective digit of an indexed a respective number.
- 7-12. (Cancelled)

13. (Currently Amended) A computer-readable medium having stored thereon instructions which, when executed by a processor, cause the processor to perform the operations of:

receiving a number-range search query having ~~one or more number ranges~~ a number range, wherein ~~at least one~~ the number range includes ~~at least one~~ a boundary number ~~having one or more digits~~;

generating an expression of ~~one or more~~ numerical index terms based on the boundary number, wherein ~~at least one of the~~ a respective numerical index term in the expression includes information ~~associated with an indexed~~ indicative of an integral portion of a logarithm of the boundary number; and

searching a document index using the expression to identify ~~identifying~~ one or more documents containing ~~indexed~~ numbers that satisfy the expression.

14. (Cancelled)

15. (Currently Amended) The computer-readable medium of claim 13, wherein at least one numerical index term in the expression includes information indicating that a specified digit is the last non-zero digit of a respective number.

16 (Currently Amended) The computer-readable medium of claim 13, wherein at least one numerical index term in the expression includes information indicative of the sign of ~~at least one~~ a respective number.

17. (Currently Amended) The computer-readable medium of claim 13, wherein at least one numerical index term in the expression includes information indicative of a number type associated with a respective number range.

18. (Currently Amended) The computer-readable medium of claim 13, wherein ~~at least one numerical index term~~ the expression includes ~~information indicative of at least one a~~ plurality of numerical index terms that each correspond to a single respective digit of an ~~indexed~~ a respective number.

19-24. (Cancelled)

25. (Currently Amended) A search engine for querying number range searches, comprising:

a query encoder configured to receive a search query for a number range having at ~~least one~~ a boundary number, wherein the query encoder is configured to generate an expression of ~~one or more~~ numerical index terms based on the boundary number, and wherein ~~at least one~~ a respective numerical index term in the expression includes information ~~associated with an indexed~~ indicative of an integral portion of a logarithm of the boundary number; and

an index server coupled to the query encoder and configured to search a document index using the expression to identify one or more documents containing ~~indexed~~ numbers that satisfy the expression.

26. (Cancelled)

27. (Currently Amended) The search engine of claim 25, wherein at least one numerical index term in the expression includes information indicating that a specified digit is a last non-zero digit of a respective number.

28. (Currently Amended) The search engine of claim 25, wherein at least one numerical index term in the expression includes information indicative of the sign of ~~at least one~~ a respective number.

29. (Currently Amended) The search engine of claim 25, wherein ~~the~~ at least one numerical index term in the expression includes information indicative of a number type associated with ~~the~~ a respective number range.

30. (Currently Amended) The search engine of claim 25, wherein ~~at least one numerical index term~~ the expression includes ~~information indicative of at least one~~ a plurality of numerical index terms that each correspond to a single respective digit of an indexed a respective number.

31-36. (Cancelled)

37. (New) The method of claim 6, wherein a respective numerical index term in the expression represents a respective digit of a respective number in base 10.
38. (New) The method of claim 37, wherein the respective numerical index term in the expression corresponds to the position of the respective digit within the respective number.
39. (New) The method of claim 1, wherein the integral portion of the logarithm of a respective boundary number is an integral portion of a base 10 logarithm of the respective boundary number.
40. (New) The method of claim 1, wherein a respective numerical index term in the expression includes information indicative of a mantissa of a respective number.
41. (New) The computer-readable medium of claim 18, wherein a respective numerical index term in the expression represents a respective digit of a respective number in base 10.
42. (New) The computer-readable medium of claim 41, wherein the respective numerical index term in the expression corresponds to the position of the respective digit within the respective number.
43. (New) The computer-readable medium of claim 13, wherein the integral portion of the logarithm of a respective boundary number is an integral portion of a base 10 logarithm of the respective boundary number.
44. (New) The computer-readable medium of claim 13, wherein a respective numerical index term in the expression includes information indicative of a mantissa of a respective number.
45. (New) The search engine of claim 30, wherein a respective numerical index term in the expression represents a respective digit of a respective number in base 10.
46. (New) The search engine of claim 45, wherein the respective numerical index term in the expression corresponds to the position of the respective digit within the respective number.

47. (New) The search engine of claim 25, wherein the integral portion of the logarithm of a respective boundary number is an integral portion of a base 10 logarithm of the respective boundary number.

48. (New) The search engine of claim 25, wherein a respective numerical index term in the expression includes information indicative of a mantissa of a respective number.